

APPENDIX B:
SCOPE OF WORK



A.D. MARBLE & COMPANY

**Scope of Work
US 301 Project Development
New Castle County, Delaware**

Amendment #6

**Division of Transportation Solutions
Open End Agreement 1221-2 (Task 2)**

**Prepared for Rummel, Klepper & Kahl (RK&K) Engineers
Prepared by A.D. Marble & Company**

September 5, 2006

Introduction

The following scope of work has been prepared to finish the limited Phase I Archaeology studies within DelDOT owned parcels, finalize the Determination of Eligibility Report, prepare the Determination of Effect Report and finalize the Phase II/III Bog Turtle Survey Report. The work covered under this scope will assist the project team with environmental clearance activities through signature of the DEIS.

Task 1.0. Preliminary Field Test of the Archaeological Predictive Model – Parcel 1

Reporting and Review of Parcel 1 Findings – Parcel 1

Once the Phase I fieldwork for Parcel 1 has been completed and any recovered artifacts have been analyzed, a brief management summary letter report will be generated. This report will provide information on the Phase I results, centering on the horizontal and vertical extent of identified sites, and the age and preliminary function of the sites. This report will include pertinent photographs, figures, tables and maps, as well as an artifact catalog. This report will include recommendations for further work, if necessary. Also, the report will discuss the implications for Phase I testing of Parcel 2 and the implications as it regards the predictive model.

A total of six copies of this management summary report will be provided to RK&K, DelDOT and DESHPO for review. After comments to this report have been addressed, a meeting will be arranged to discuss the findings and the implications. If preferable, this meeting may take the form of a conference call. One revision to the document is anticipated.

Task 2.0. Preliminary Field Test of the Archaeological Predictive Model – Parcel 2

Reporting and Review of Parcel 2 Findings – Parcel 2

Upon the completion of the Parcel 2 Phase I fieldwork and artifact analysis, a brief management summary letter report will be generated. This report will provide information on the Phase I results, as described above. If appropriate, this report will include recommendations for further work. Also, the report will discuss the implications as it regards the predictive model and further archaeological testing.

A total of six copies of this management summary report will be provided to RK&K, DelDOT and DESHPO for review. After comments to this report have been addressed, a meeting will be arranged to discuss the findings and their implications. Again, this meeting may take the form of a conference call, if preferable. One revision to the document is anticipated.

Task 3.0. Memorandum of Agreement

A.D. Marble & Company will work closely with DelDOT, DESHPO, the project team and other groups to seek measures to avoid, minimize, and/or mitigate adverse effects to historic resources. It is anticipated that a maximum of five historic resources will be adversely effected by the project. Therefore, A.D. Marble & Company will prepare a MOA for the project. This agreement between the Federal Highway Administration (FHWA), DelDOT, and DESHPO, with concurrence from the Advisory Council on Historic Preservation (ACHP), if necessary will outline the mitigation measures associated with the adverse effects upon the historic resources within the project study area limits as a result of the implementation of the project. The MOA will be prepared for only the preferred alternative.

Due to the inaccessibility of some properties and other extenuating circumstances, it is anticipated that a complete assessment of the project's effects on archaeological resources will not be possible before the completion of the DEIS. Therefore, the MOA will summarize the results of the archaeological studies undertaken to date. The document will also specify the actions the FHWA and DelDOT will undertake to assure that FHWA satisfies its responsibilities for U.S. 301 Project Development under Section 106 of the National Historic Preservation Act of 1966, as amended. A draft MOA will be provided to FHWA and DelDOT for review prior to submission of the DEIS. DelDOT's Environmental Studies unit will make all subsequent changes to the document.

Task 4.0. Historic Structure Eligibility Documentation

Based on previous meetings and comments from DelDOT and DESHPO it is assumed that, except where previous direction on revisions has been provided, future drafts of the eligibility report will need to address the DelDOT and DE SHPO comments received to date. It is anticipated that the revision effort will include revisions to the graphics, CRS forms, narrative write ups, database, extensive report reorganization, and addressing comments on the transportation context. This proposal accounts for coordination with DelDOT and DE SHPO staff for further direction on report revisions, and assumes a maximum of two additional

meetings. This proposal also assumes that a maximum of two additional resources may require documentation should the existing APE be expanded to accommodate slight shifts in the alignments. The revised reports will be submitted prior to completion of the DEIS. Only one additional revision to the eligibility and reconnaissance report is anticipated.

Task 5.0. Assessment of Effect Report

The assessment of effect document will evaluate the potential project impacts on all resources listed in, or eligible for listing in the National Register. The analysis of impacts will examine direct physical, visual, or auditory impacts as well as secondary and cumulative impacts. A project description, description of the resource and alternatives, and application of the Criteria of Effect and the Criteria of Adverse Effect will be included. It is possible that the report may find that the project will have No Adverse Effect on historic properties, if none of the proposed alternatives will impact the characteristics that qualify the properties for inclusion in the National Register of Historic Places. If the report presents a finding of Adverse Effect recommendations for mitigation will be included. It is anticipated that a maximum of 25 resources will be evaluated in the effect report. A detailed effect assessment will be conducted for the preferred alternative and a screening level assessment will be made for all other alternatives.

For each resource, the report will include a description of the historic property and a discussion of National Register eligibility, including the characteristics that qualify it for inclusion in the National Register. During the course of the intensive level survey, photographs will be taken from the documented resources towards the proposed alignments; those photographs taken from eligible resources will be included in the report. Supplemental photographs will also be taken along the alignments to show the area of proposed improvements.

It is assumed that a maximum of ten draft and ten final hard copies of the assessment of effect report will be provided. CD copies will be provided upon request.

Task 6.0. Phase II and III Bog Turtle Surveys

Phase II and III field surveys are complete for the project. A.D. Marble & Company will take the lead in preparing a report to summarize all of the Phase II and III surveys that were conducted for the project. Staff will compile the results of the other consultants surveys into table format including the surveyor's names, dates, weather conditions, time spent and animals located. We will include maps of the Phase II areas and datasheets in the report. For sites that undergo Phase III surveys, A.D. Marble & Company will provide a detailed map of the trap locations and a log of the days trapped and animals captured. A total of two revisions to the report are anticipated.

A.D. Marble & Company's Qualified Bog Turtle Surveyor will also prepare the DEIS report section related to the bog turtle survey.

Task 7.0. Project Management/Coordination and Meetings

Representatives from A.D. Marble & Company will attend up to five (5) field or project meetings.

Jason Vendetti will continue his responsibilities for providing support to DelDOT and RK&K with regard to project management duties, such as the timely completion of tasks and submissions performed by A.D. Marble & Company in accordance with the company's quality assurance/quality control plan. A.D. Marble & Company will prepare monthly status reports and submit to RK&K. The status report will include activities completed to date, a schedule of upcoming activities, and budgetary information.



A.D. MARBLE & COMPANY

Scope of Work US 301 Project Development New Castle County, Delaware

Amendment #2

Division of Transportation Solutions Open-end Agreement

**Prepared for Rummel, Klepper & Kahl (RK&K) Engineers
Prepared by A.D. Marble & Company**

August 8, 2005

The project consists of improvements to the US 301 Corridor in New Castle County, Delaware. Actual work for this project to be conducted under this supplemental scope is expected to take place between July 2005 and December 2005.

The purposes of the studies will be:

- to conduct an intensive level survey of the above ground resources that may be affected by the project's Alternatives Retained for Detailed Study (ARDS);
- to evaluate the National Register eligibility of previously unevaluated resources;
- and to assess the effect of the proposed roadway improvements on historic properties (listed or determined eligible for listing in the National Register).

The survey effort will build on information gathered during the reconnaissance survey. The Historic Context and Reconnaissance Survey Report, prepared as part of the original Scope of Work (SOW) dated June 7, 2005, will be consulted during the intensive level survey effort and refined in consultation with Delaware Department of Transportation (DelDOT) and Delaware State Historic Preservation Office (DESHPO) staff. The following SOW presents a detailed discussion of the research design and methods to be employed by this phase of the project. A.D. Marble & Company will work closely with DelDOT and Rummel, Klepper & Kahl (RK&K) Engineers, to determine the extent and type of coordination effort required for the project.

The Cultural Resources Survey will be performed in accordance with Section 101(b) (4) of the *National Environmental Policy Act*; Section 1 (3) and 2 (b) of *Executive Order 11593*; Section 106 of the *National Historic Preservation Act of 1966, as amended in 1999*; 23 CFR 771; the guidelines developed by the Advisory Council on Historic Preservation (November 26 1980) and

the amended "Procedure for the Protection of Historic and Cultural Properties" as set forth in 36 CFR 800 (October 1, 1986). This legislation requires that the effect of any federally assisted undertaking on historically significant buildings, structures, objects, or sites be taken into account during the project planning process. Significant sites are those listed in or eligible for listing in the *National Register of Historic Places*. The Cultural Resources Survey will be undertaken in accordance with the *Guidelines for Architectural and Archaeological Surveys in Delaware* of the Delaware State Historic Preservation Office (DE SHPO) and the Secretary of the Interior's Standards and Guidelines.

Project Area Description

The Area of Potential Effect (APE) generally encompasses an area that extends 600 feet to either side of the center line of the ARDS. A parcel is considered within the APE if even part of it is located within the 600-foot buffer, and therefore all of the parcel will be examined for potential resources. The APE will continue to be modified to accommodate changes in project engineering and/or to include additional areas of potential impacts to historic resources. Based on the results of the reconnaissance survey, approximately 100 unevaluated aboveground resources are present in the APE. The APE will be further refined and updated during the intensive-level survey effort.

Task 1. Fieldwork

The intensive level survey will involve an examination of the previously unevaluated resources in the APE that were identified during the reconnaissance survey. Surveyors will visit properties with a copy of the intent-to-enter letter issued for the project as well as the informational brochure that was prepared under the previous SOW. Fieldwork to be conducted at each of the properties will include completing the appropriate CRS forms, preparing photo logs, labeling site plans, and taking notes.

To document the loss and/or retention of integrity, 35mm, black-and-white photographs of each elevation of each building on a property (if accessible and visible) will be taken. Notable architectural details will also be recorded. Overall views of the property's setting will also be photographed. In anticipation of effects assessment, a view of the resource to the nearest area(s) of proposed improvements will be documented.

If during the field survey A.D. Marble & Company staff are denied access to a property, the staff will leave the property and notify DelDOT and RK&K.

Informal Interviews

Informal interviews will be conducted with property owners when available to gain further information on the history of the resource and to help guide additional research efforts. Topics to be covered during the informal interviews include: the development of the property, the historic and current use of the buildings, and the history of property ownership.

Field Form Completion

Using the fields of the GIS database that was completed during the reconnaissance level survey, draft copies of the Cultural Resource Survey (CRS) forms will be generated for properties in the APE prior to field work: Property Identification Form (CRS 1), Survey Update Form (CRS 10), and Map Form (CRS 9). During the intensive level survey, the CRS 1, CRS 9, and CRS 10 forms will be field checked. The site plan of the CRS 9 form (based on 2002 high quality aerials) will show the property's relationship to nearby roadways, streams, or other notable landmarks. The site plan will be labeled to show specific buildings, roadways, relationship(s) between features, and/or relevant landscape elements. The CRS 9 form will also include a north arrow. In cases where significant alterations have affected the National Register eligibility of a resource, the approximate age of additions will be noted. Following the intensive level survey, if necessary, the CRS 1 and 10 forms will be updated, and the GIS database will be revised accordingly.

During the reconnaissance survey, CRS 10 forms were prepared for those resources that were previously documented and subsequently demolished; CRS 10 forms were not prepared for extant above ground resources. For those previously documented resources that remain above ground, the previous record will be consulted during fieldwork to determine if a significant level of change has occurred since the initial survey date. For those properties that already have adequate architectural description forms on file (including Main Building [CRS 2] and/or Secondary Building [CRS 3] forms), a CRS 10 form will be prepared and photographs will be taken. Previously surveyed resources that lack adequate architectural documentation and/or have had substantial changes since the previous documentation will require completion of supplemental forms during fieldwork (ie., CRS 2 and/or 3 forms).

For newly identified resources, in addition to the CRS 1 form, CRS 2 and CRS 3 forms will be completed by hand in the field. Additional applicable CRS forms will be filled out for specific property types on an as-needed basis. For further discussion of the use of specific CRS forms, please consult Task 3 of this SOW.

Finally, since the overall focus of the survey effort is a critical examination of the integrity of the resources, all resources will be identified by property type and examined in the field using the evaluation procedures developed in the Historic Context and Reconnaissance Survey Report. To facilitate a field assessment of integrity and significance, a field checklist of the procedures for National Register evaluation will be developed for agricultural properties and residential architecture (the two most common property types in the APE).

Task 2. Background Research

The level of historic research to be conducted as part of future work efforts will be determined in coordination with DelDOT and the DE SHPO. The appropriate level of background research will be based on a resource's retention of integrity and/or level of significance. Retention of integrity will be determined during a field examination of the resource. Thus, background research will be carried out following field work.

Many of the previously unevaluated resources in the APE appear to lack integrity due to significant alterations; relocation from historic setting and location; and loss of features dating to the initial period of construction and/or historic-period of use. Additionally, the reconnaissance survey revealed many examples of common mid-twentieth century architectural forms with limited or unremarkable architectural detailing and significance. These dwelling forms, found widely throughout St. Georges Hundred, New Castle County, and the State of Delaware, do not appear to warrant detailed examination unless they are particularly well-preserved examples of their type or may have the potential to yield information.

Due to the number of previous National Register listings in the APE and the general level of compromised integrity and/or lack of architectural significance of the remaining resources, evaluations of National Register eligibility will initially focus on retention of integrity. If the integrity of the property is so diminished that it would preclude the property from conveying significance under specific National Register criteria, then the historic research effort will be limited to: 1) an examination of historic mapping; 2) interviews with the property owner, if available during field work; and 3) an examination of tax assessment data.

Property-specific historic research will be required for:

- Resources that retain integrity from the period of significance;
- Resources that are rare or notable property types, as these will require lesser levels of integrity to be potentially eligible (i.e., log dwellings, tenant houses, and resources associated with the African-American community; and/or
- Agricultural complexes.

Property specific research to be conducted for these resource types will include an examination of deeds, wills, and other land conveyance materials to establish chain of title for the property. Additional primary resources, such as tax data, probate records, or other period documentation, may be consulted for rare or early examples of property types in the study area.

Based, on the results of the windshield survey, this SOW anticipates that 50 resources will require a general level documentation and evaluation and 50 resources will require a property-specific level of documentation and evaluation.

Task 3. African-American Community Interviews

Oral interviews will be conducted with two informants who were identified at the June public meetings as knowledgeable of the history of the African-American community. In preparation for the interview, previous documentation on the African-American community of the APE and its vicinity will be examined. A list of questions will be prepared in advance of the interviews, and DelDOT and DE SHPO staff will have the opportunity to provide comments on the interview questions in advance of the interviews. DelDOT and DE SHPO staff will also be consulted on proper interview procedures. The interviews will be conducted in a two-part format involving: 1) a field view of the resources in the APE and 2) a question-and-answer session. The

results of the oral interviews will be presented in written format and included with the CRS form documentation of the African-American community.

Task 4. CRS Form Completion

As aforementioned, CRS forms will be completed for all previously unevaluated resources that were present on the landscape by 1962. As discussed under field survey efforts, the CRS 1, CRS 9, and CRS 10 forms for demolished resources will be generated from the database and checked in the field. The remainder of the forms will be completed by hand in the field (under Task 1). This task specifies which forms will be completed; provides for the entry of the field survey forms into Microsoft Word; specifies the level of detail that will be included in the narrative portion of the form; and provides for submission of the CRS forms. It is anticipated that a total of 100 resources will be evaluated for this task.

CRS 2 forms will be completed for any standing building that defines the main use(s) of the property. This form will record materials, plan, decorative elements, and construction technology. It is assumed that most of the buildings in the survey area will not be accessible on the interior. If access to the interior of the building is available, the interior details will be noted on the CRS 2 form.

The CRS 3 form will be completed for secondary buildings or outbuildings related to the main building identified on the CRS 2 form. It is assumed that CRS 3 forms will not be completed for resources that post-date 1962.

Any previously unevaluated man-made structures on the landscape, such as the railroad, will be documented using the Structure/Land Feature Form (CRS 6). Cemeteries will be documented using the Landscape Elements Form (CRS 8). If any other landscape features that are not easily recorded on other forms are identified during the survey effort, the CRS 8 form will be used.

Contact Sheet Forms (CRS 12) will be prepared for each roll of 35 mm negatives taken. The roll numbers will be assigned by the DE SHPO staff following approval of the eligibility report. Photographic Inventory Cards (CRS 13) will be provided for individual properties. The photograph documentation will be prepared in accordance with guidelines provided by the DE SHPO staff.

Collections/Groupings

Properties that share geographic, historic, or architectural features may be documented as districts or collections. The following property types are examples of resources that may be documented collectively: crossroads communities, strip development, mobile home parks, and rural African-American communities. If the collection of buildings is determined to be a collection, then the grouping will be documented on the CRS 14 form. Individual CRS forms would then be completed for resources within the collection that were present by 1962. Should the collection contain a number of similar building types, such as the mobile home park, only the most notable examples of the resource type would be documented on individual CRS forms.

Narrative Write-up

The narrative portions of the CRS form will include a brief written description of the property that will serve to supplement the detailed information presented in the CRS forms. The focus of the write up will be the historical development of the resource and the features that remain/or have been altered over time. Specific topics to be discussed will include: setting, location, relationship between features, date of construction (including modern buildings), building(s) historic and current functions, notable features, and integrity. Physical descriptions of buildings will be limited since this information will be detailed on related CRS forms.

The background research (discussed in Task 2) and evaluation of National Register eligibility of the resource will be included in the narrative write up. The evaluation will be based on the guidelines provided in the Historic Context and Reconnaissance Survey Report. The initial focus of the evaluation will be retention of integrity. Should a property retain integrity, then the potential significance of the resource with respect to each of the National Register Criteria will be discussed. If applicable, proposed National Register boundary descriptions will be prepared, following guidelines established by the National Park Service (*National Register Bulletin, "Defining Boundaries for National Register Properties"*).

Submission

The draft copy of the CRS forms will be submitted as an appendix to the Determination of Eligibility Report. CRS numbers for the previously unidentified resources will be issued by the DE SHPO and will replace the temporary control numbers assigned by A.D. Marble & Company during the reconnaissance survey. Final copies of the forms will be provided to DelDOT in Microsoft Word. As requested in the DE SHPO Survey Forms Instructions and Data Coordination Guidance, no color will be used in the preparation of the CRS forms. It is assumed that a maximum of 10 draft and 10 final hard copies of the CRS forms will be provided. CD copies will be provided upon request.

Task 5. Rural Historic District Investigation

This task will address the potential eligibility of a rural historic district in the APE including the area along Levels Road. This effort will involve:

- mapping planned future developments on historic-period farms and farmland;
- a critical field examination of the landscape;
- application of the guidelines for evaluation of rural historic districts outlined in the Historic Context and Reconnaissance Survey Report;
- and additional consultation with DE SHPO and DelDOT staff.

The results of the rural historic district investigation will be presented in the Determination of Eligibility Report and will include graphic illustrations.

Task 6. National Register Boundary Resolution and Supplemental Documentation

A number of resources in the APE were previously listed in the National Register. It is anticipated that this task will require additional coordination and revaluation of a maximum of eight National Register boundaries in the APE. This will include field assessments, coordination meetings, and preparation of supplemental documentation. The supplemental documentation on boundaries will be prepared in the format of National Register addendums and will include the appropriate level of documentation and a justification for proposed boundary revisions.

For those properties in the APE with previous determinations, prior documentation will be examined, and if necessary, associated buildings will be inventoried using the appropriate CRS form. It is anticipated that additional CRS forms will be prepared for a maximum of 15 properties with previous National Register evaluations.

Task 7. Eligibility Report and Determinations of Eligibility

The eligibility report will present the results of the intensive level survey effort. The report will include: citations of applicable regulations; a description of the APE; a methodology for the historic structures survey and evaluation; a discussion of the status of archaeology; mapping of all resources documented in the APE; a discussion of the potential for rural historic districts within the APE; photographs to illustrate the study area and recommendations; and CRS forms for all previously unevaluated resources that were present by 1962. For each evaluated resource, the report will include: a description of the property, a discussion of National Register eligibility, including the characteristics that qualify or disqualify it for inclusion, and a photograph that illustrates the eligibility of the resource. The photograph will be located within the body of the report in the discussion of the resource. CRS forms prepared for the project will be included in an appendix. CRS forms for previously documented resources will be included as a separate appendix. National Register nomination forms will be prepared for all properties that are recommended eligible for Determinations of Eligibility (DOE)s. It is anticipated that a maximum of ten (10) DOE forms will be prepared. The DOE forms will be included in an appendix of the eligibility report.

Task 8. GIS Database

The previous SOW provided for data entry into the GIS database, and the database was largely completed during the reconnaissance survey. The GIS database will be further updated during the course of the intensive level survey effort. Following its completion, the GIS database will be delivered to DelDOT for delivery to the DE SHPO. The updated database will include the CRS numbers assigned by DE SHPO staff to unidentified resources. (These resources were previously assigned a temporary control number during the reconnaissance survey). As part of the database effort, any necessary corrections to the GIS mapping provided by the DE SHPO will be provided to the DE SHPO staff.

Task 9. Assessment of Effect Report

The assessment of effect document will evaluate the potential project impacts on all resources listed in, or eligible for listing in the National Register. The analysis of impacts will examine direct physical, visual, or auditory impacts as well as secondary and cumulative impacts. A project description, description of the resource and alternatives, and application of the Criteria of Effect and the Criteria of Adverse Effect will be included. It is possible that the report may find that the project will have No Adverse Effect on historic properties, if none of the proposed alternatives will impact the characteristics that qualify the properties for inclusion in the National Register of Historic Places. If the report presents a finding of Adverse Effect recommendations for mitigation will be included. It is anticipated that a maximum of 25 resources will be evaluated in the effect report.

For each resource, the report will include a description of the historic property and a discussion of National Register eligibility, including the characteristics that qualify it for inclusion in the National Register. During the course of the intensive level survey, photographs will be taken from the documented resources towards the proposed alignments; those photographs taken from eligible resources will be included in the report. Supplemental photographs will also be taken along the alignments to show the area of proposed improvements.

View shed analyses will also be conducted as part of this task. Cross section type illustrations showing the resource, any intervening visual barriers, and the proposed improvements, will be developed by A.D. Marble to assist in the impact analysis. A.D. Marble & Company will work closely with RK&K on the locations of the cross sections. If appropriate, digital view shed analyses will also be prepared in order to present and clarify potential impacts to resources. A total of 10 digital renderings/assessments will be prepared to clarify potential impacts to resources. It is anticipated that RK&K will provide the noise impact data for use in the report. It is assumed that a maximum of ten draft and ten final hard copies of the assessment of effect report will be provided. CD copies will be provided upon request.

Task 10. Cultural Resources Coordination/Review/Consultation/Meetings

Additional coordination is anticipated at key decision making points, such as during the revisions to the Eligibility Report, during the Effect Report phase, and through the preparation and circulation of the DEIS. This task provides for coordination efforts via phone with the team and with agencies and/or for meetings with local residents in the project area.

Additionally, member(s) of A.D. Marble & Company's project team will be available for the following meetings:

- Five (5) team meetings in Dover (one representative from ADM)
- Four (4) public workshops: two (2) in September and two (2) in November (one representative from ADM)

A.D. Marble & Company will prepare for each meeting and provide cultural resource related materials as requested by RK&K and DelDOT. A.D. Marble & Company will also assist RK&K in preparing the cultural resource display boards for both public workshops.